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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,688	09/29/2003	Satoshi Abe	P24336	7419

7055 7590 01/22/2007  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 ROLAND CLARKE PLACE  
RESTON, VA 20191

EXAMINER
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TENTONI, LEO B

ART UNIT	PAPER NUMBER
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1732

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	01/22/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/22/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

**Office Action Summary**

Application No.

10/671,688

Applicant(s)

ABE ET AL.

Examiner

Leo B. Tentoni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 October 2006 has been entered.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 4-7 and 9-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The originally-filed specification fails to state or teach one of

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ordinary skill in the art how a concave portion is formed on a lower part of a sintered block (claims 1 and 9, lines 8-9; it appears that a concave portion is formed on a lower part of a layer, since the sintered block is a plurality of layers), how an upper surface of a concave portion formed on the sides of a sintered block be declined from the outside towards the inside (claim 9, lines 9-10), how a concave portion surface of a lower part of a sintered block accepts a hanging portion of an excess portion (claim 1, lines 10-11 and claim 9, lines 11-12) and how an excess portion from a surface of a sintered block is removed without also removing a hanging portion (claim 1, lines 12-13 and claim 9, lines 13-14). Without this disclosure, one of ordinary skill in the art could not practice the claimed invention (In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988); MPEP 2164.01, 2164.01(a)).

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 4-7 and 9-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The expressions "the sides of the sintered block including a concave portion formed on a lower part of the sintered block" (claim 1, lines 8-9), "accepting a hanging portion of an excess portion by the concave portion surface of the lower part of the sintered block" (claim 1, lines 10-11; claim 9, lines 11-12), "removing the excess portion from a surface of the sintered block" (claim 1, lines 12-13; claim 9, lines 13-14) and "the sides of the sintered block including a concave portion wherein an upper surface of the concave portion is declined from the outside toward the inside" (claim 9, lines 8-10) render the claims indefinite principally because it is not clear what applicant intends to cover by such recitations (e.g., it is not clear how a concave portion is formed on a lower part of a sintered block (claims 1 and 9, lines 8-9; it appears that a concave portion is formed on a lower part of a layer, since the sintered block is a plurality of layers), how an upper surface of a concave portion formed on the sides of a sintered block be declined from the outside towards the inside (claim 9, lines 9-10), how a concave portion surface of a lower part of a sintered block accepts a hanging portion of an excess portion (claim 1, lines 10-11 and claim 9, lines 11-12) and how an excess portion from a surface of a sintered block is removed without also

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removing a hanging portion (claim 1, lines 12-13 and claim 9, lines 13-14).

### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claim 8 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3, 4 and 6-12 of copending Application No. 10/304,963 in view of Exner et al (DE 19953000 A1). Claims 3, 4 and 6-12 of copending Application No. 10/304,963 recite a process of making a three-dimensional object as claimed, except

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for irradiating an optical beam along an outline, which is taught by Exner et al (see the entire document, in particular, the figure (numerals 10 and 12)), and such would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of copending Application No. 10/304,963 in view of Exner et al principally in order to improve the solidification rate of the three-dimensional object (by solidifying an outline) and ensure solidification of the edges (i.e., the outline) of the three-dimensional object. Claims 3, 4 and 6-12 of copending Application No. 10/304,963 do not explicitly recite inorganic material; however, this would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of copending Application No. 10/304,963 principally because the claims of copending Application No. 10/304,963 recite powder material, which encompasses inorganic material and inorganic materials are used in selective laser sintering (or SLS) processes.

This is a provisional obviousness-type double patenting rejection.

8. Claim 8 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 10/546,455 in view of Exner et al (DE 19953000 A1). Claims 1-8

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of copending Application No. 10/546,455 recite a process of making a three-dimensional object as claimed, except for irradiating an optical beam along an outline, which is taught by Exner et al (see the entire document, in particular, the figure (numerals 10 and 12)), and such would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of copending Application No. 10/546,455 in view of Exner et al principally in order to improve the solidification rate of the three-dimensional object (by solidifying an outline) and ensure solidification of the edges (i.e., the outline) of the three-dimensional object. Claims 1-8 of copending Application No. 10/546,455 do not explicitly recite inorganic material; however, this would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of copending Application No. 10/546,455 principally because the claims of copending Application No. 10/546,455 recite powder material, which encompasses inorganic material and inorganic materials are used in selective laser sintering (or SLS) processes.

9. This is a provisional obviousness-type double patenting rejection.

10. Claim 8 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over



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claims 2-15 of U.S. Patent No. 6,657,155 B2 in view of Exner et al (DE 19953000 A1). Claims 2-15 of U.S. Patent 6,657,155 B2 recite a process of making a three-dimensional object as claimed, except for irradiating an optical beam along an outline, which is taught by Exner et al (see the entire document, in particular, the figure (numerals 10 and 12)), and such would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of U.S. Patent 6,657,155 B2 in view of Exner et al principally in order to improve the solidification rate of the three-dimensional object (by solidifying an outline) and ensure solidification of the edges (i.e., the outline) of the three-dimensional object.

Claims 2-15 of U.S. Patent 6,657,155 B2 do not explicitly recite inorganic material; however, this would have been obvious to one of ordinary skill in the art at the time the invention was made in the process of U.S. Patent 6,657,155 B2 principally because the claims of U.S. Patent 6,657,155 B2 recite powder material, which encompasses inorganic material and inorganic materials are used in selective laser sintering (or SLS) processes.

#### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1 and 4-13 have been considered but are moot in view of the new ground(s) of rejection.

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### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo B. Tentoni whose telephone number is (571) 272-1209. The examiner can normally be reached on Monday - Friday (6:30 A.M. - 3:00 P.M.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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*Leo B. Tentoni*

Leo B. Tentoni  
Primary Examiner  
Art Unit 1732

lbt